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Rapid electroanalysis of uric acid and ascorbic acid using a poly(3,4-ethylenedioxythiophene)-modified sensor with application to milk

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1        **Rapid Electroanalysis of Uric Acid and Ascorbic Acid using a**  
2                    **Poly(3,4-ethylenedioxythiophene)-modified Sensor with**  
3                                    **Application to Milk**

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13  
14        **Abstract**

15        Here we present a sensitive and selective electrochemical sensor that has been developed for  
16        the analysis of uric acid and ascorbic acid in milk with minimum interference from each  
17        other. A conducting polymer, poly(3,4-ethylenedioxythiophene) (PEDOT), was prepared  
18        electrochemically as a thin layer on a glassy carbon electrode and then acclimatized to an  
19        aqueous buffer before sample analysis. The modified sensor showed an excellent catalytic  
20        response towards the oxidation of uric acid, with an anodic peak during cyclic  
21        voltammograms at around 350 mV (Ag/AgCl), taken at pH 6.6 as typical of untreated milk  
22        samples. A small peak due to ascorbic acid was located close to 0 mV, enabling the

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